2000 POPULATION STATUS REPORT
PRAIRIE CHICKENS

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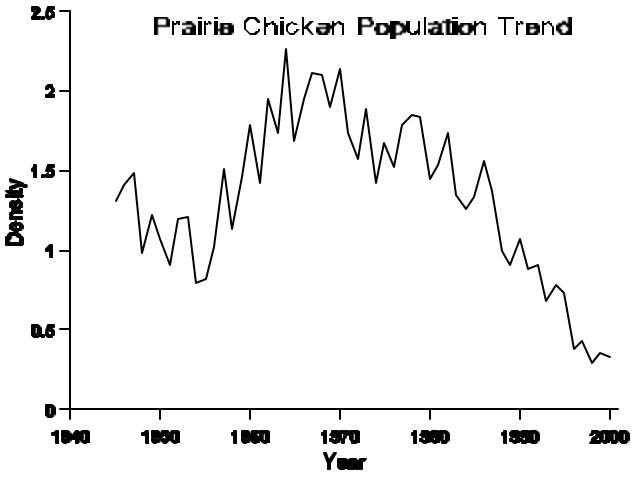
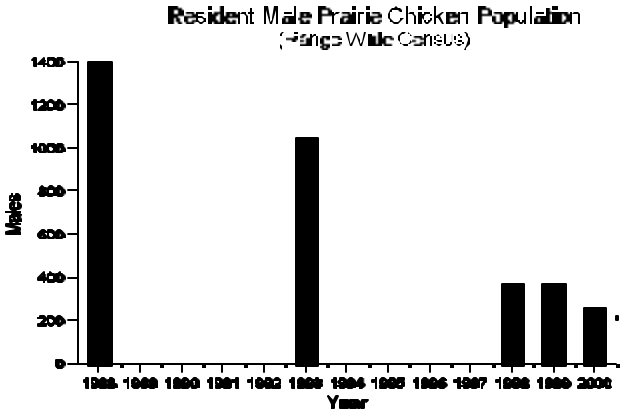
RESIDENT POPULATION

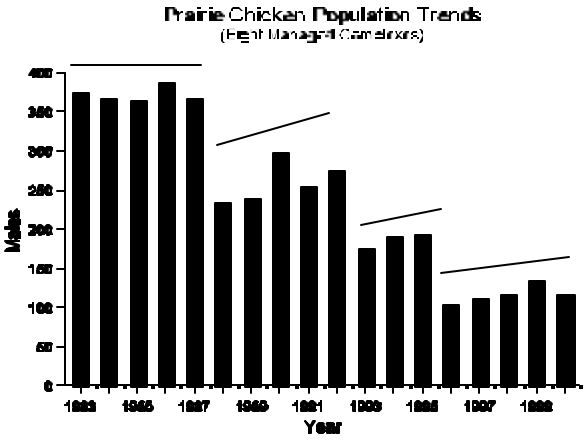
Survey Results:

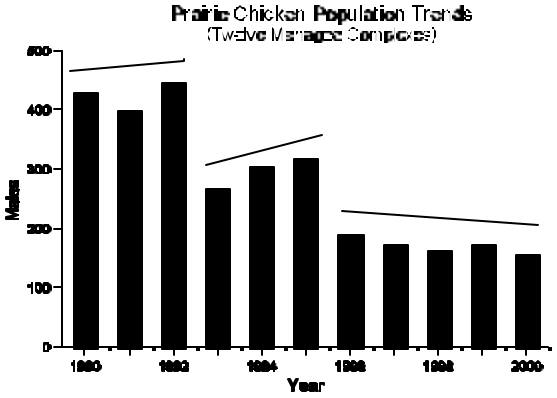


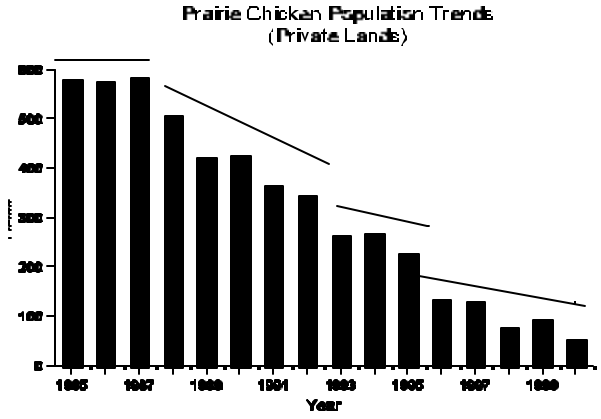




Annual surveys of booming grounds along 16 routes and 35 management units (a unit includes a management area and private land within one mile) are conducted each year. The results from those surveys can be used to define prairie chicken population trends. The steep decline defined by survey data over the last thirty years now may be leveling off. Densities over the past five years are similar. We may have reached a point where current habitat will maintain current population levels. This is paramount because time is required for the efforts of the Grassland Coalition and others to result in a substantial increase of quality grassland habitat. It has been a concern from the formation of the Grassland Coalition that the prairie chicken population would wane before real increases in habitat could be put on the ground to stimulate population growth. This apparent leveling of population levels is a positive sign. Since 1988, at five year intervals, a complete census of the male population on booming grounds has also been conducted. However,

the statewide population has declined to the point that few birds exist outside annually surveyed areas and by surveying a few additional areas we essentially each year do a complete census of booming males within the occupied prairie chicken range.

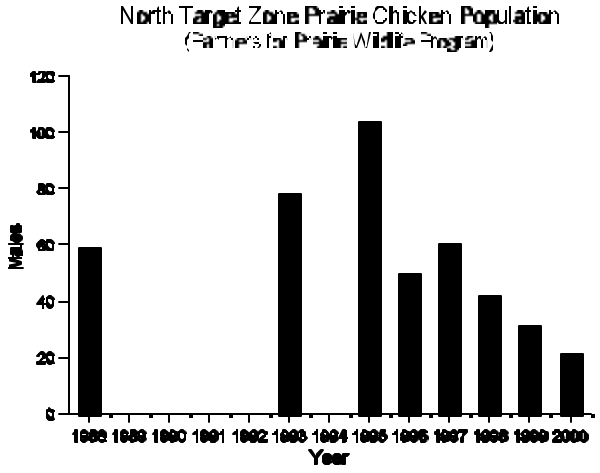


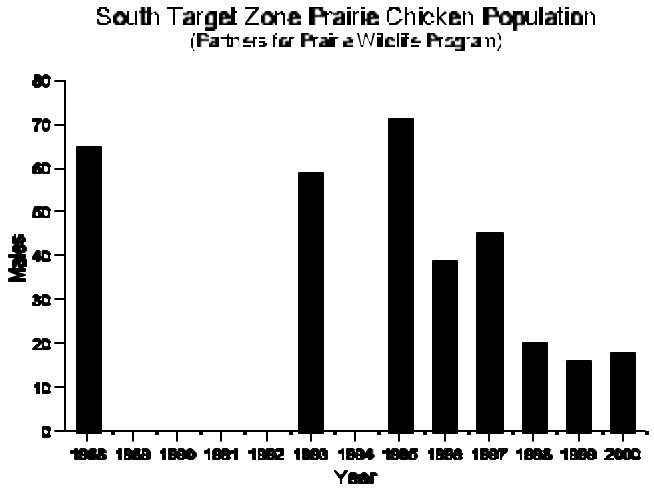




Survey results show short- term positive, but long-term negative movement for populations associated with complexes managed by public agencies (MDC and DNR) or NGOs (MPF and TNC). The path to local extinction becomes apparent as one views the pattern of decline. The number of displaying males noticeably dropped in 1988, 1993 and 1996 on both public/NGO and private lands. These reductions were most likely caused by some event such as weather, etc. one or two production seasons prior to 1988, 1993 and 1996 that reduced recruitment into the male booming population. Populations on public/NGO lands show some recovery or stabilization in the years following these events, but always at a lower level. On private grounds, habitat has reach such a state that there is no recovery. Bad recruitment years are a fact of life with upland bird populations, but not having the habitat base and producers within the population to respond during good years leads populations into a death spiral. Other problems such as lack of genetic diversity, a much reduced population range and small numbers of

individuals can make populations less fit for survival and more vulnerable to stochastic events. Eventually a point is reached where recovery becomes very difficult. DNA samples taken from 33 birds on seven different leks in 1999 were analyzed and compared with samples taken in Kansas to investigate whether Missouri's birds are experiencing a loss of genetic fitness. Preliminary results indicate that is not the case. Final analysis and a discussion of results will be available at the end of this year. In addition to being sampled for DNA analysis, birds were tested for the presence of Reticuloendotheliosis viruses. These viruses in recent years had caused fatalities of birds at the propagation facilities for the endangered Attwater's Prairie Chicken in Texas. None of our birds tested positive for the viruses.




Population figures for the two target areas of the Partners for Prairie Wildlife Program follow the trends of the statewide resident population. Each of these areas is forty square miles in size. Even though we have seen positive results around some of the public/NGO managed areas within the target areas, losses in other parts of the large target areas pull the population numbers down. In some cases we haven't been able to affect habitat adjacent to particular public/NGO managed properties and spring counts on the public/NGO areas themselves have declined.

These seem to be dire times and at risk is much more than the prairie chicken population. There is a suite of grassland species in jeopardy.

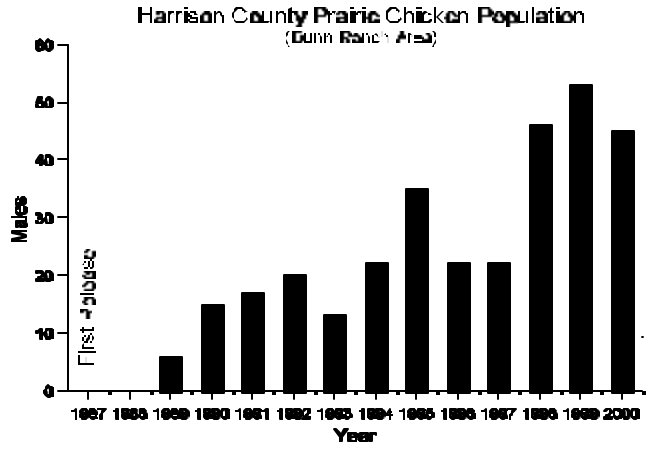
We have to focus our efforts where we can make the most difference; pick our battles. Some recent acquisitions and initiatives are bringing new hope to this strategy. Recent purchases by TNC (Dunn Ranch + and additions to Wah-Kon Tah) have added significantly to grassland habitat managed with the needs of prairie chicken in mind. Since these areas recently purchased by TNC were already in grass and utilized by prairie chickens the main benefit to the change in ownership will be in the management of those grasslands. New Management will result in higher quality grassland bird habitat and the sustain ability of that habitat over the long haul. One should not expect immediate increases in population numbers. Habitat improvement and the ensuing response by grassland wildlife require time.

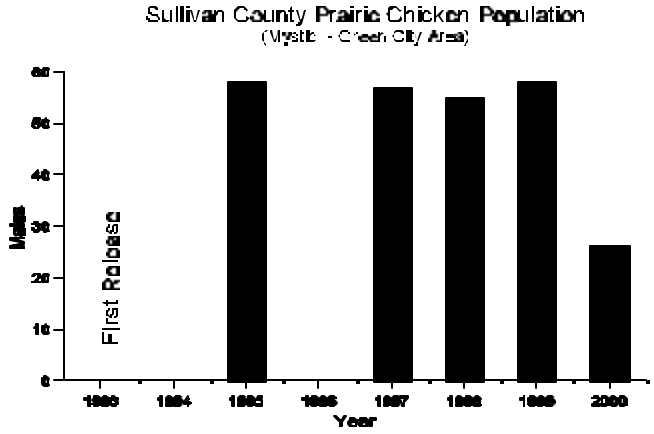
The formation of the Grassland Coalition that involves several state agencies, NGO's and interested private landowners has increased the options available to work with a broad spectrum private landowners. Improvements around Taberville Prairie CA and on private lands where the Greenridge prairie chicken population resides have come about due to the diverse membership of the Coalition. The strategy of focusing on where our best populations of prairie chickens remain, identifying the missing habitat components in the immediate area, and creating those components using all the tools available to the Coalition will work.

Tailored plans to improve habitat and increase awareness around selected focus areas for improved management have and continue to be developed by Grassland Coalition teams. The heightening of awareness among Missouri's citizenry of the plight of Missouri's grassland communities and the generation of funds to preserve and improve management of those communities continues to be the greatest limiting factor. Supported by the Missouri Prairie Foundation, the Lek Trek that began July 22 this year at Dunn Ranch in Northwest Missouri will begin to address these needs. The Lek Trek will continue through the summer as it moves across the state culminating at Prairie State Park October 14th.

**REINTRODUCED POPULATION**

Survey Results:




Populations in Harrison and Sullivan counties have done well since birds were reintroduced to those areas. This spring forty-five booming males were counted along the six mile long survey route (Dunn Ranch +) set up in Harrison County and 26 were counted on the four booming grounds monitored in Sullivan County. The drop in birds counted in Sullivan County this year is of concern. However, populations can recover quickly given good habitat and environmental conditions. Numbers of males counted in 1995 in Harrison County dropped significantly in 1996, remained down in 1997, but more than recovered in 1998. The number of males counted within the Harrison County survey route was also down this spring even though 90 birds were released last spring fifteen miles south of the survey area. Radio telemetry data from previous reintroductions tell us some of those birds would have moved to established populations including those near Dunn Ranch. In addition, no birds were recorded during spring surveys in the immediate release areas. All of these survey results would indicate poor production conditions in 1999 in the northern part of the state.

Many researcher have experience difficulty in getting prairie chickens to remain in release areas

where no current populations exist. Some work has been done releasing birds during the summer molt period when birds seem to be more reluctant to disperse. The difficulty in testing this technique more fully is that birds are extremely difficult to capture in any number that time of year. As capture techniques are further developed this release method should receive further attention. We don't see evidence of birds from established populations, even those that are growing such as the one at Dunn Ranch, pioneering any distance to establish new flocks. Young males are known to disperse long distances and each year I get reports of them showing up in odd places. This may serve as a means of genetic exchange with other flocks, but not to promote the occupation of new range. We haven't and probably won't see the prairie chicken population reach the critical mass that must have caused pioneering on a grand scale during early Midwest settlement. This was a time when prairie chickens expanded through Nebraska, the Dakotas and into three provinces of Canada.